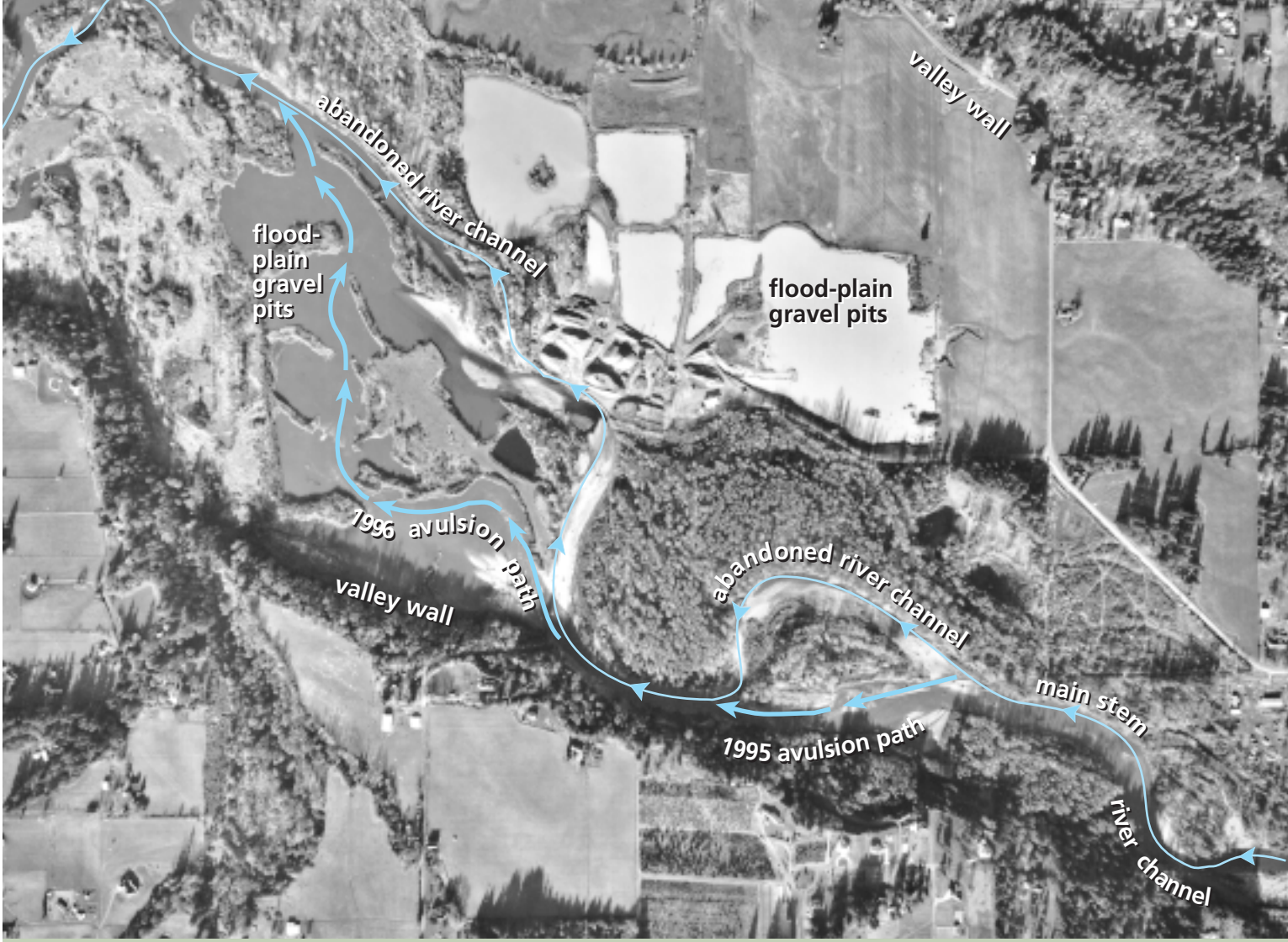

DNR

Avulsion—Capturing a River

Sometimes human impacts and natural events combine to change the flow of a river. The natural course of a river includes its flood plain. In what is known as "avulsion," a surface mine pit located in a flood plain may suddenly reroute a river during a flood, "capturing" the river.

Gravel spawning beds or other habitat in an abandoned channel become unavailable to fish. Gravel from upstream gradually fills the breached mine pit instead of getting washed downstream to replenish gravel bars. The river becomes less stable and less hospitable to salmon.

If the river develops multiple channels, the water must be shared, and the water level in the main channel drops. Shallower water or water flowing more slowly through a large pit is likely to be warmer. This can kill salmon directly, affect growth rates, prompt disease outbreaks, or create habitat for warm-water fish that prey on juvenile salmon.

When the east fork of the Lewis River (shown here) was captured in 1995, it abandoned 1,700 feet of gravel spawning beds, and when captured again in 1996 it abandoned another 3,200 feet. The river is home to one of western Washington's few remaining wild steelhead runs.